

BIODIVERSITY AND INTERDEPENDENCE

Early Level E&O:

SCN 0-01a

Supporting E&Os:

SOC 0-08a, MNU 0-01a, MNU 0-02a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a, LIT 0-14a, HWB 0-19a, HWB 0-20a, HWB 0-50a, EXA 0-04a

Big Questions:

What is a “living thing”?

How do we know if something is “alive”?

Real World Jobs:

Zoologist, Botanist, Microbiologist,
Ecologist, Veterinarian, Entomologist

Learning Intention:

We are learning how to explore living things in the environment.

Success Criteria:

- We can identify and sort living things, non-living things and once-living things.
- We can describe how some living things depend on other living things for food.
- We may begin to understand the importance of all living things on our planet and find ways to conserve them.

Materials:

- Picture prompts of living, non-living and once-living items
- Portable ten frames
- 3 large hoops for sorting
- Minibeast ID charts (see link)
- Collecting pots and dishes
- Large white bed sheet or cloth
- Bug nets
- Magnifying tools
- Bag of clay or salt dough

Starter Activities (30 mins):

In the circle, ask the learners “What is a living thing?” Allow the learners to discuss and give their own answers. Then ask “How do we know if something is alive?” Discuss any answers given. Show the learners the picture prompts of living things, non-living things and once-living things. Ask them “What do we see?” Steer the discussion towards understanding what the differences are between living and non-living, living and once-living, once-living and non-living. (10 mins)

Task the learners to find 10 objects to place on their ten frame. These should be a mixture of living, non-living and once-living objects. Discuss any risks involved in picking such as spines, sharp edges, stings and hygiene. Discuss risks involved in moving around the space and looking where we are going. They may work in pairs or small groups to complete the task and return with their complete ten frame. Give a time limit and recall the learners after your given time. (10 mins)

Back in the circle, ask each pair/group to sort and categorise their 10 objects found into the 3 large hoops using your picture prompts to label the hoops. Discuss the end results as a group. Are all the objects in the right hoop? Are there any objects that could be in more than one hoop? (10 mins)

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups:

Lead Bug Hunts using collecting pots and bug nets. A large white cloth or bed sheet can be used for tree-beating (shaking a branch over the sheet and collecting the fallen beasties). Guide the learners to ID their finds through using a variety of picture ID charts and keys. Discuss where they found minibeasts and what they might eat (plants, dead leaves, other minibeasts etc.) or be eaten by (other minibeasts, birds, bats, hedgehogs, moles, shrews etc.).

Useful background and further information: https://www.abdn.ac.uk/media/site/sbs/documents/Minibeast_background_info_for_teachers.pdf

This Key from RZSS is great for discussing the number of legs between insects (6 legs), arachnids (8 legs), myriapods (many legs): https://learning.rzss.org.uk/pluginfile.php/1319/mod_page/content/8/Mini-beasts%20Key.pdf

Adult-supervised in Small Groups:

Using clay or salt dough, challenge the learners to make their own minibeast models and characters using found natural materials. They may go on to create a habitat or home for their model.

Play Provocations:

Bug Hotels: Provide a variety of model minibeasts and natural materials for making bug hotels. These can include sticks, pinecones, brown leaves, moss, wood chips and straw.

Dinosaur Small World Play: Make dinosaur habitats from natural materials. For example, volcanoes from mud, dirt or sand, small rock piles, fern leaves.

“Living things” Hospital: Have some already broken or “injured” toy animals that need looking after in the hospital. Provide a Hospital sign or chalkboard with chalks. Provide gauze bandages and fabric strips. Provide trays that can be used as hospital beds or stretchers.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Story Links:

- *The Bug Collector* by Alex G Griffiths
- *Hey, Little Ant* by Phillip and Hannah Hoose

Substitute, Follow-up or Extension Activities:

- Classroom tank habitat with minibeasts such as earthworms, woodlice, snails to care for and observe in the classroom.
- Comparing and contrasting the scavenger hunt with outdoors and indoors - what do we notice? Learners may find less living things indoors compared to outdoors.
- Bug symmetry - beetles, spiders, butterflies - drawing, painting or making models.
- Conservation activities - Litter-picking, gardening, upcycled bird feeders and bug hotels

PLANTS

Early Level E&O:

SCN 0-03a

Supporting E&Os:

SOC 0-08a, MNU 0-01a, MNU 0-16a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a, HWB 0-19a, HWB 0-20a, HWB 0-50a, EXA 0-04a, EXA 0-02a

Big Questions:

Are plants "living things"?
Can plants live anywhere?

Real World Jobs:

Botanist, Ecologist, Horticulturalist,
Gardener, Farmer, Florist, Forestry

Learning Intention:

We are learning about what plants need.

Success Criteria:

- We can name the basic needs of a plant.
- We can grow a plant from a seed.

Materials:

- Mystery Bag of objects containing: 2 different tree seeds, 2 different leaves, fir needles, bare stick, twig with leaves, bark, tree fruit, piece of root, a sock, dog bowl, cat toy, a snack, sunglasses.
- Cut flowers (enough for one per learner)
- A4 card
- Scissors
- Glue
- Pens/pencils
- Selection of seeds
- Selection of small pots/containers/yoghurt pots for planting into
- Trowels or spoons for planting
- Compost/soil for planting
- Water

Starter Activities (20 mins):

Have a Mystery Bag of items prepared for the activity. In the bag, included several objects from parts of a tree/plant, such as 2 different types of tree seed (examples: pine cone, beech nut, conker), different sized/shaped leaves (examples: horse chestnut, beech, fir needles), bare sticks, tree fruits (examples: apple, elderberries, plum), twigs with leaves on, bark pieces, roots from a plant, (and galls (optional if you have them). Also include in the bag some objects that are not parts of a tree/plant. These can be animal or human related, for example: a sock, sunglasses, a snack, a cat toy, a dog bowl.

In the circle, show one object at a time from the Mystery Bag. Challenge the learners to guess and identify what each object is. Start with some easier objects before selecting more challenging ones. Discuss each object briefly and then after a few items have been shown, pause and discuss how we can start to sort these objects into two groups - one for trees/plants and one for everything else. Continue with the Mystery Bag until you have shown all objects or feel the group is ready to move on. You can challenge the learners to find new Mystery Objects for your bag whilst they are exploring. (20 mins)

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups:

Provide some supermarket cut flowers that the learners can cut up and stick onto a piece of a cardboard to create a collage. Discuss what each part of the flower they cut is called. You can label them on the cardboard with either some premade labels for identifying the different parts such as “stem”, “leaf”, “petals”, “flower”, “roots” or by writing directly onto the cardboard next to the plant part with pen/pencil. You can also have laminated diagrams of the different parts of a flower for those more independent learners who may wish to copy from and label their own work.

Adult-supervised in Small Groups:

Have a “Garden Centre” area, where you provide lots of small pots/containers, water, trowels/spoons, soil/compost and a variety of seeds that the learners can come along and plant their own pot to look after and care for. You may also wish to provide craft items for the learners to be able to decorate their own pots, such as stickers, paint or coloured paper tape. You can extend this by creating a growing diary back in class.

Some useful background information and additional resources and ideas can be found here: https://www.stem.org.uk/system/files/elibrary-resources/legacy_files_migrated/29873-Parts%20of%20a%20plant%20and%20their%20functions.pdf

Play Provocations:

Artist Inspiration: Andy Goldsworthy - using photo prompts of Andy Goldsworthy's artworks in nature, allow learners to create their own artwork using nature on site.

Plant Shop Role Play: Provide empty pots and containers, chalk boards and chalk, trays and planks that could be used for shelves.

Tree/Plant ID Hunt: provide magnifying tools and tree/plant ID keys, or scavenger hunt lists for the learners to try and find.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Story Links:

- *The Tiny Seed* by Eric Carle
- *Tree* by Britta Teckentrup
- *Leaf Man* by Lois Ehlert
- *The Giving Tree* by Shel Silverstein

Substitute, Follow-up or Extension Activities:

- Hapa Zome: Provide hammering tools (hammers, stones, small logs), scraps of plain white fabric (cut up bed linen works well), and planks of wood or solid surface to work on. Hapa Zome is the art of hammering plant material onto fabric to “print” the natural dyes within the plant material.
- Growing different native tree seeds to plant out for conservation projects. You can contact your local ranger or organisation.
- Conservation activities - Litter-picking, gardening, planting new trees

WATER

Early Level E&O:

SCN 0-05a

Supporting E&Os:

SOC 0-07a, MNU 0-01a, MNU 0-02a, MNU 0-10a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a, HWB 0-19a, HWB 0-20a, HWB 0-50a, EXA 0-04a, EXA 0-02a

Big Questions:

Is water important?

Where does water come from and where does it go?

Real World Jobs:

Water Engineer, Meteorologist, Water Technician, Farmer, Gardener, Ecologist

Learning Intention:

We are learning about water.

Success Criteria:

- We can talk about water in nature and how it affects us.
- We can identify the different states of water - ice, water and steam.
- We can use the words "melting", "freezing" and "boiling" to describe water changing state.

Materials:

- Water samples in 3 different states in 3 different insulated flasks: ice cubes, boiling water and room temperature water.
- Three bowls/containers - ideally transparent so you can see through them but can still work otherwise.
- Large/medium-sized plastic bottles (enough for each group)
- Compost/soil
- Sand
- Small rocks/pebbles or gravel
- Grass seeds
- Moss
- Water
- Duct tape
- Sharp scissors

Starter Activities (15 mins):

In a circle, display your three flasks and ask the learners what do they think are inside the flasks. One at a time, show what is inside each flask by pouring half the contents carefully into a bowl or container. Keep half back to top-up during your discussions.

Discuss how we would describe the different states of water and what temperatures are involved. Discuss how does water change from one state to another? For example, when does water become steam? When does water become ice? What happens when we add ice to different temperatures of water?

Allow the learners to ask questions and use the water samples in your bowls to show how to investigate and answer their questions.

"When water is boiling, and the temperature goes up, we are likely to see water turn into steam. We could say the water is turning from a liquid to a gas."

“When water is freezing and the temperature goes down, we are likely to see water turn into ice. We could say the water is turning from a liquid into a solid.”

“When we add ice into water (room temperature and boiling), we can see that the ice is melting. We could say that when the temperature goes up, ice which is solid water will turn back into liquid water.

We may notice that the hotter the water, the faster it melts too!”

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups:

Create Terrarium Bottles. The terrariums will demonstrate how the water cycle provides for an ecosystem. You can make the terrariums outside and place them inside on your classroom windowsill to observe and discuss over time. You will see how the water in the terrarium evaporates during the day and condenses at the top of the bottle. The condensed water then drips back down to the soil layers and the water cycle starts again. The planted seeds will grow inside the bottle.

VIDEO - How to make a terrarium: <https://cubscoutideas.com/2447/how-to-make-a-terrarium/>

- Cut a large plastic bottle about two thirds up so that you are separating the funnel part from the main bottle.
- In the main part of the bottle, add a layer of small stones/gravel about 2cm deep.
- Next add a layer of sand about 1cm deep.
- Finally add a layer of soil about 3-5cm deep depending on the size of your bottle.
- Sprinkle some grass seeds on top of the soil and lightly rake them in.
- Optional: Add a larger pebble and some moss for decoration, but do not cover up all of the soil. Allow spaces for the grass to grow.
- Add a little water - Make sure the soil is moist but not water logged.
- Replace the funnel part of the bottle on top and seal with duct tape to keep the moisture in. You can leave it unsealed but will need to top up the moisture occasionally. Place near or on a windowsill and observe.

Play Provocations:

Water Play: Provide a variety of buckets, containers, bottles, tubes, funnels, jugs, ladles and sponges with water/snow/ice.

Water Colours: Provide water colour paints, paper and brushes. Notice the evaporation process as paintings dry.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Story Links:

- *The Water Hole* by Graeme Base
- *Drop* by Emily Kate Moon
- *Where do they go when it rains?* by Gerda Muller

Substitute, Follow-up or Extension Activities:

- Pond or Stream Dipping in small groups if you have access to a nature pond or stream with permission. Use ID charts to identify what you find.
<https://scottishwildlifetrust.org.uk/resource/have-a-go-at-pond-dipping/>
- River and Dam making - linking to erosion and natural behaviour of beavers - these can be set up in class or outside using tuff trays, clay, sand, water, sticks and small world toys. Create a mini river landscape and challenge the learners to dam it.
<https://scottishwildlifetrust.org.uk/resource/build-like-a-beaver/>

SOUND

Early Level E&O:

SCN 0-11a

Supporting E&Os:

SCN 0-12a, SOC 0-18a, MNU 0-01a, MNU 0-02a, MNU 0-20a, MNU 0-20b, LIT 0-01a, LIT 0-02a, LIT 0-04a, HWB 0-19a, HWB 0-20a, EXA 0-04a, EXA 0-02a, EXA 0-17a

Big Questions:

Can we hear all sounds?

Why are sounds important?

Why do we have lots of different sounds?

Real World Jobs:

Sound Engineer, Musician, Sound Designer, Audio Visual Technician, Production Engineer, Composer

Learning Intention:

We are learning about sound.

Success Criteria:

- We can create lots of different sounds using a variety of objects and materials.
- We can predict what something might sound like.
- We can make sounds quieter and louder.
- We can identify who or where a sound is coming from.

Materials:

- Mystery Sound Boxes - these can be five small tissue boxes or shoe boxes containing a variety of different natural or man-made objects inside.
- A variety of different sized recycled containers which can close or have lids - plastic bottles, crisp/sweetie tubes, tubs, pots and cartons. Do not use glass.
- A variety of materials to fill the shakers - pine cones, sand, gravel, dried lentils, dried rice, oats, pebbles, bottle tops, small sticks, small bells etc.
- Duct tape and scissors
- Stickers, colour paper tape to decorate
- Coloured pens or sharpies
- Camera or iPad for taking photos

Starter Activities (20 mins):

In a circle, display your five Mystery Sound Boxes. These mystery boxes should contain a natural or man-made object inside that will make a different sound. For example: a pine cone, a bell, a toy car, a sponge, pine needles. Explain to the learners that each one of these mystery boxes contains an object(s). Ask them, will they be able to guess what the object is from its sound? Shake each box one at a time and allow the learners to describe the sounds and make guesses. You can reveal the objects as you go.

In the circle, ask the learners to sit or lie down and be as silent as a snail. Explain that we are going to just listen in silence for 1 minute. In our own heads can we silently count the number of different sounds we can hear? After a minute, ask the group to describe how many and what kinds of sounds they heard. Did they only hear the sounds or could they "feel" the sounds too? Can they sort the types of sounds into groups such as loud sounds and quiet sounds? High sounds and low sounds? Natural sounds and human-made sounds?

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups:

Make Sound Shakers. Use different sized recycled containers with lids or ones that close, such as a variety of plastic bottles, tubs, crisp or sweetie tubes, cartons and plastic pots with lids. Have a variety of materials on hand to fill the containers such as sand, gravel, dried lentils, dried rice, oats, pebbles, pine cones, small sticks, bottle tops, small bells etc.

- Fill a container with one or two materials. Decide on what sounds best - a half full container or a full one and fill accordingly.
- Seal the container - use the lid if it has one or seal with duct tape.
- Decorate the outside of your shaker with stickers, coloured paper tape, coloured pens. You can even take a note of what was inside so you can remember.
- Shake your shakers! What do they sound like? Do they make a low sound or a high sound? Can you feel the vibrations when you shake them?
- Get some friends together and make a Shaker Band!

Adult-supervised in Small Groups:

Go on a Listening Walk and capture the different sounds you hear using photography. Allow the learners to direct and take their own photographs if possible and supervise the use of technology (camera or iPad) to do so. These photos can be used later in class for sorting and discussion. You can also use a bird sound app such as Merlin Bird ID (<https://merlin.allaboutbirds.org/>) to record and identify any bird calls you may hear.

Play Provocations:

Provide a variety of boxes, tins and containers with some different length sticks to make drum-like instruments.

Provide some musical instruments that can be used outdoors such as bells, tambourines, drums and shakers.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Story Links:

- *Good-night Owl!* by Pat Hutchins
- *Badger's Band* by Julia Donaldson
- *The Story Orchestra: Four Seasons in One Day (Vivaldi)* by Jessica Courtney Tickle
- *Clap, Clap!* By Madalena Matoso

Substitute, Follow-up or Extension Activities:

- Learn how to make different bird sounds. Owl: Cup your hands together and bend your thumbs slightly to create a mouthpiece - blow steadily through the hole of your thumbs. Listen to different bird sounds and try to mimic them as best you can!
- Rain Drums - Using yoghurt pots or jars, put wax paper over the open tops and secure with an elastic band. Leave out in the rain and listen to the noise of the rain bouncing off the tops of the "drums".
- Have a look at this OWL resource for more ideas - [Music-in-the-Woods-Final-Web-Version-07_25-compressed.pdf](#)

SENSES

Early Level E&O:
SCN 0-12a

Supporting E&Os:
SOC 0-07a, MNU 0-02a, MNU 0-20a, MNU 0-20b, LIT 0-01a, LIT 0-02a, LIT 0-04a,
HWB 0-47b, HWB 0-16a, HWB 0-17a, EXA 0-16a, EXA 0-17a, EXA 0-19a

Big Questions:

What are senses?
What do we need senses for?

Real World Jobs:

Police, Military, Sommelier, Masseuse, Textile
Designer, Food Critic, Chef, Surgeon, Pilot

Learning Intention:

We are learning about our senses.

Success Criteria:

- We can identify our five senses and which body parts are linked to them.
- We can use our five senses to describe what we can see, hear, smell, feel and taste.

Materials:

- Mystery Sensory Boxes - these can be five small tissue boxes containing objects or materials as follows:
- One box with a bell inside - fully sealed (sound)
- One box with cinnamon stick inside - small hole to sniff (smell)
- One box with fluffy cloth/sand-paper inside - unsealed (touch)
- One box with a mirrored bottom (mirror card) - unsealed (sight)
- One box with a wrapped biscuit/sweetie inside - unsealed (taste). Do not allow anyone to eat this.
- Sticks for the pretend fire
- Red/orange fabric/cloth for the pretend fire
- A safety rope
- Optional: pre-made popcorn, cups for serving and hand-washing supplies such as bottled water, soap and paper towels.
- Long card strips
- Double-sided tape

Starter Activities (15 mins):

In a circle, display your five Mystery Sensory Boxes. These mystery boxes should contain objects or materials that use one of the five senses: sight, sound, smell, touch and taste. Pass each box around the circle and allow the learners to investigate which one of their senses the box is about. Is the object or material something they can smell? Something they can feel? Something they can see? Something they could taste? Something they can hear? Which part(s) of their body do they or would they use - nose, ear, mouth, hand, eyes?

In the circle, can they use their senses to notice anything else about where we are? Can they hear any sounds around us? Notice how if we close our eyes, we can hear things louder. Can they feel anything around us - including whether it is cold or warm today? Does this help us choose what to wear? Can they smell anything around us? Finally can they see anything special around us? Like the wind blowing or an insect flying.

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups:

Play Campfire Popcorn using a pretend campfire made of sticks and red/orange fabric to represent flames. Gather your small group around the campfire and teach them the rules of campfire safety. Around the “fire” there should be a “safety rope”. The rule is: no one is allowed past the safety rope. The safety rope stops us from getting too close to the fire. The safety rope helps us to stay safe and away from the very hot flames. Let’s practice how we move around the fire and the safety rope safely by walking and not running. You can play a game of Fruit Salad around the fire using safe walking feet only.

Model and teach this campfire poem with actions. Repeat 3 times:

Popcorn, popcorn, (*flick hands like twinkle stars*)

Sizzling in a pan. (*wiggle fingers like playing a piano*)

Shake it up, shake it up, (*pretend to shake the pan*)

Bam, bam, bam! (*clap 3 times*)

Popcorn, popcorn, (*flick hands like twinkle stars*)

Getting very hot. (*pretend to wipe sweat from your brow*)

Shake it up, shake it up, (*pretend to shake the pan*)

Pop, pop, POP! (*clap 3 times*)

Optional if suitable for your group: You can serve ready-made popcorn for a snack/treat around your pretend camp-fire. Serve in small cups. Teach handwashing and food hygiene rules.

Adult-supervised in Small Groups:

Make a Sticky Crown. Using card strips that are long enough to wrap around a head, . make a crown that fits and secure with tape. Then add a strip of double sided tape around the outside of the crown. Look for different leaves and natural finds to stick to the tape to make your Sticky Crown. Supervise and guide the learners on the risks of picking plants - teach them to check for thorns and identify stinging nettles.

IMPORTANT: Risk assess your site so you are aware of any risky plants and conditions.

Play Provocations:

Mud Kitchen - provide a range of pots, pans, wooden spoons and baking trays that can be used for a mud kitchen.

Potion Lab - provide some water and a range of jugs, containers and stirrers, and various sensory herbs that can be crushed and smelled for the learners to turn into potions.

Provide paper/sketchbooks with a range of drawing materials for recording, mark-making, drawing and creating. Allow learners to document from their environment or be inspired by their environment.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Whole group recital of the Popcorn Poem together at the end if time allows.

Story Links:

- Campfire story: *Stone Soup*
<https://www.campfiremarshmallows.com/campfire-stories/stone-soup-frenchhungarianetc/>
- *Wordy Birdy* by Tammi Sauer
- *Wow Said the Owl* by Tim Hopgood
- *Red Leaf, Yellow Leaf* By Lois Ehlert

Substitute, Follow-up or Extension Activities:

- Go on a Leaf Hunt - Collect leaves on your leaf hunt and make a Leaf Monster. Describe their Leaf Monster and what they can do.
- I Spy/Hear Games - Use binoculars or make cardboard-tube binoculars for spying. Set up a scavenger hunt using a mix of objects to find and sounds to hear. You can use Sound Buttons as part of your scavenger hunt and record either nature sounds or words from your literacy or topic lessons to find.
- Have a look at this OWL resource for more ideas - [Music-in-the-Woods-Final-Web-Version-07_25-compressed.pdf](#)

WEATHER

Early Level E&O:

SOC 0-12a

Supporting E&Os:

SCN 0-05a, SCN 0-12a, MNU 0-01a, MNU 0-10a, MTH 0-17a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a HWB 0-19a, HWB 0-20a, HWB 0-50a, EXA 0-14a

Big Questions:

What is weather?
Who controls the weather?

Real World Jobs:

Meteorologist, Fishermen, Sailor, Farmer,
Firefighter, Windfarm Engineer, Pilot

Learning Intention:

We are learning about weather.

Success Criteria:

- We can name and talk about two different types of weather and the impact of these.
- We can record the weather over three days.
- We can describe how the weather makes us feel.

Materials:

- Small pieces of tarp - enough for each small group and rope or string to be able to tie or secure them.
- Old blankets or old sleeping bags - enough for each small group
- Mud kitchen equipment such as wooden spoons, mixing bowls, jugs, baking trays, muffin trays and spatulas - enough for each small group to have a small selection.
- A device to be able to play the poem reading at the end such as a mobile phone or iPad.
- Weather recording resources: outdoor thermometers, measuring beakers, wind sock/vanes - allow the children to explore these ahead of recording the weather over a three day period.

Starter Activities (15 mins):

Role play the weather! In the circle, tell the group to imagine a BIG storm is coming! What kind of weather does that mean? Can we act out the weather? Pretend to be a strong wind blowing around in circles and spirals. Pretend to be the rain falling lightly or heavily onto the ground. Pretend to be thunder, starting small and growing bigger with a growl. Pretend to be lightning making sudden sharp movements like an electric shock. Pretend to be snow, flowing around like a blizzard or floating lightly from the skies. This will get the whole group moving and warmed up. As the group gently float like snow you can get them to float back into the original circle to pause for thought. How did each of the weathers make us feel as we acted them out? Which one excited us most? Which one did we feel less comfortable with? Which one felt calm? How would we protect ourselves against different weathers? What would we wear? Where would we go? Discuss what humans need to survive: water, food, shelter and warmth.

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-supervised/Child-led in Small Groups:

Can we build a camp to survive the storm? We need to be quick, and we need to choose the best sites to protect ourselves. Help your small groups to set up camp and leave them to explore and play within their camps:

- Provide shelter building/den building resources to set up a camp - this can be as simple as a small piece of tarp for each group to create a “shelter”.
- A blanket or old sleeping bags to help them for “warmth”.
- Mud kitchen equipment for the children to create “water” and “food”.

You can add to their play and imagination by pretending to be the storm. Go around each of the dens and pretend to rattle the tarp and try to blow away their blankets. Allow the children to hunker down and protect themselves from your storm.

Play Provocations:

Weather measuring and recording resources such as thermometers, measuring jugs and plastic beakers, wind vanes and wind socks. Allow the children to explore these.

Provide some musical instruments that can be used outdoors such as tambourines, drums, rain sticks and shakers. The children can use these to create their own “storms”.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

Listen to this poem together at the end of the session and discuss what it is about:

The Calm After the Storm

<https://childrens.poetryarchive.org/collections/wonderful-winter/>

Story Links:

- *The North Wind and The Sun* (fable)
<https://www.bbc.co.uk/teach/school-radio/articles/zwd39ty>
- *Where Do They Go When It Rains?* by Gerda Muller
- *The Wind Blew* by Pat Hutchins
- *A Year in Percy's Park* By Nick Butterworth

Substitute, Follow-up or Extension Activities:

- Record the weather over three days and keep a weather chart for record. Measure the rainfall using marked containers or measuring beakers. Measure temperature using outdoor thermometers. Measure wind direction using a wind sock and wind speed using a visual chart like: <https://www.cambridgeforestschoools.co.uk/wp-content/uploads/2020/02/wind-scale-1.pdf>
- Sorting weather types into seasons. Using pictures or objects to signify different weather types. For example: wellies for rain, woollen hat for cold, sunglasses for sun. https://surbitonhillnursery.uk/wp-content/uploads/2020/06/t-t-5421-weather-clothes-sorting-activity_ver_6.pdf
- Animal hibernation exploration: why do some animals hibernate? Build and create ideal hibernation habitats for creatures such as hedgehogs, frogs and the small tortoiseshell butterfly. <https://www.wildlifetrusts.org/blog/guest/hibernation-wildlifes-winter-survival-strategy>

MATERIALS

Early Level E&O:

SCN 0-15a

Supporting E&Os:

SOC 0-18a, TCH 0-09a, TCH 0-10a, MNU 0-01a, MNU 0-02a, MTH 0-16a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a HWB 0-19a, HWB 0-20a, EXA 0-02a, EXA 0-14a

Big Question:

What are materials and where do they come from?

Real World Jobs:

Engineer, Builder, Textile Designer, Fashion Designer, Furniture Maker, Interior Designer, Surgeon

Learning Intention:

We are learning about using different materials.

Success Criteria:

- We can sort materials into different groups based on their properties. For example: strong, smooth, rough, floats, sinks etc.
- We can choose a material to use for a purpose and explain our choices.

Materials:

- 2-3 objects for each material: wood, metal, plastic, stone and fabric. These should be a mix of naturally-found items and human-made items.
- Word labels/signs for "wood", "metal", "plastic", "stone", "fabric", "smooth", "rough", "hard", "soft", "bendy", "straight", "squishy"
- Three large hula-hoops for sorting
- Cream/white calico or cotton fabric
- Wooden planks or chopping boards
- Tools for hammering: mallets, rolling pins, rounded stones

This session will use play as a method for exploring materials further. Focus on providing provision for your play provocations such as mud kitchen equipment, natural loose parts and den building resources.

Starter Activities (15 mins):

Scavenger hunt in pairs. Depending on your site, you may have enough materials around to start with, but if not, you may wish to place some objects out so that the learners can find what you ask for. Ask each pair to:

"Find something that is made of...?"

- **Wood**
- **Metal**
- **Plastic**
- **Stone**
- **Fabric**

Discuss the objects found and the materials they are made from. What have they found? Is the object made from human-made or natural materials? What is a natural or human-made material? Why do we think this material was used if it is man-made?

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led as a Whole Group (15 mins):

Place large hoops on the ground and explain to the learners that we are going to sort the objects found in the scavenger hunt starter activity. Sorting means grouping the objects up in a particular way. Ask the learners if any of the objects have more than one type of material? How can we group these? Allow the learners to direct and decide on how the objects could be sorted.

Ask the learners what sorts of things can we use the materials for? Den-building? Dams or bridges? Mud kitchens? Arts and decoration? Pretend play? Can we re-sort the groups by look and feel? (smooth, hard, rough, soft, bendy, straight)

Challenge the learners to think about their use of different materials in their play.

Adult-supervised in Small Groups:

Introduce the learners to the craft, Hapa Zome.

Hapa Zome is a Japanese eco-printing technique, also called leaf pounding or flower pounding, where natural pigments from fresh flowers and leaves are transferred onto fabric or paper by hammering them onto the material, creating beautiful, natural, and colorful imprints.

How to do Hapa Zome: https://youtu.be/6GCcsBtUo_c?si=O3itSWUnuWypB5LS

- The learners can explore by collecting leaves and flowers from their area or provide some cut supermarket bouquets to choose from.
- Place a piece of calico or cotton fabric onto a wooden plank or chopping board.
- Place the leaves and/or flowers onto one side of the fabric and make sure they are flat and not folded.
- Fold over the fabric to sandwich the leaves/flowers inside the fabric.
- Carefully but firmly, hammer the fabric where the leaves/flowers are hidden beneath and watch the natural pigments come through the fabric.
- Open up the fabric and brush off the remaining bits of leaves/flowers. Add more and continue or leave to air dry.
- Admire your natural piece of artwork!

Risk Assessment: Hapa Zome involves using “tools” and “hammering”, so will require some adult supervision to ensure the learners are using the equipment appropriately and safely.

Play Provocations:

Mud Kitchen - provide a range of pots, pans, wooden spoons and baking trays that can be used for a mud kitchen.

Natural loose parts, short sticks and clay for small world play.

Den building resources and equipment.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about.

Record learner interests and feed-forward to next session.

If time allows, gather in a circle, split into teams and play a game of "Go Fetch". Place the hoops around the area labelled "wood", "metal", "bendy", "squishy" etc. Place 2-3 objects or pictures in each hoop. Call a property such as "bendy" and one learner from each team needs to collect the correct item from the correct hoop for their team.

Story Links:

- *The Three Little Pigs* (nursery story)
- *Stanley's Stick* by John Hegley
- *Otto's Ocean* by Emily Hobson-Martin
- *Somebody Swallowed Stanley* By Sarah Roberts
- *Walter's Web* by Tim Hopgood

Substitute, Follow-up or Extension Activities:

- Choosing materials to build/create different habitats for different animals. Discuss each animal and what they might need for a home.
- Making a stick character with clay and then choose different materials to adorn and dress the stick figures.
- Make fairy houses with waterproof roofs. Test their effectiveness against the rain (water poured on top).

LIFE CYCLES

Early Level E&O:

HWB 0-50a

Supporting E&Os:

MNU 0-01a, MNU 0-02a, MNU 0-20a, MNU 0-20b, LIT 0-02a, LIT 0-04a, LIT 0-14a, HWB 0-19a, HWB 0-20a, EXA 0-14a

Big Question:

How did life begin on Earth?

What came first: an egg or a chicken?

Real World Jobs:

Biologist, Farmer, Vet, Tree Surgeon, Botanist, Doctor, Ranger, Conservationist, Health Visitor

Learning Intention:

We are learning about life cycles.

Success Criteria:

- We can identify where living things come from (eggs, seeds).
- We can say that living things need food, water and care to grow and survive.

Materials:

- A copy of Frog Life Cycle Role Play Activity: https://ltl.org.uk/wp-content/uploads/woocommerce_uploads/2020/04/life-cycle-stories.pdf
- Boiled eggs - enough to have at least one per learner OR rounded stones as an alternative
- A toy bird
- Nesting materials - wool fleece, straw bedding, small sticks and twigs, clay
- Life cycle models or puzzles

Starter Activities (15 mins):

Gather in a circle and explain to your learners that we are going to role play the life cycle of a frog. Tell them:

"Every living thing has a life cycle."

Frog Life Cycle Role Play Activity: https://ltl.org.uk/wp-content/uploads/woocommerce_uploads/2020/04/life-cycle-stories.pdf

At the end of the activity get the learners to summarise the different stages of a frog life cycle. Ask them if they can answer, which came first: the frog or the spawn?

Main Activities (1 hour):

Allow the learners to explore the natural area and choose their activities. Provide a mixture of adult-led groups and adult-initiated provocations and open-ended resources for child-led learning (see Play Provocations).

Adult-led in Small Groups (15 mins):

Show the group an egg and a toy bird. Ask if they can answer, which came first? The egg or the bird? Discuss their ideas and answers.

Challenge the learners to build a nest to hold and keep an egg safe. Use natural foraged materials and/or provide materials for them to use such as wool fleece, straw bedding and sticks and clay. Can they make a nest that protects their egg from breaking? Find a secure location for their nests. You can increase the challenge by using raw (unboiled) eggs that the learners need to be extra gentle with. For any allergies, you can substitute the egg for a rounded stone.

Play Provocations:

A variety of life cycle models and puzzles for the learners to explore and ask questions.

Natural loose parts and materials for creating habitats.

Minibeast ID Charts and resources for going on bug hunts and investigations.

Plenary:

Observe learners in activities and play, record and discuss findings and anything new discovered or asked about. Record learner interests and feed-forward to next session.

If time allows, gather in a circle, and using the life cycle models and puzzles challenge the learners to identify the order of the life cycles. Can they identify which stage comes after the egg stage? Which stage comes after the adult stage?

Story Links:

- *Tadpole's Promise* by Jeanne Willis
- *The Woolly Bear Caterpillar* by Julia Donaldson
- *Where, Oh Where, is Rosie's Chick?* by Pat Hutchins
- *Owl Babies* By Martin Waddell
- *Gozzle* by Julia Donaldson

Substitute, Follow-up or Extension Activities:

- Grow a bean seed and care for it.
- Classroom tank for exploring and observing life cycles over a period of time - this can be used for tadpoles or insects: <https://www.insectlore.co.uk/>
- Invent a creature and create/draw a new life cycle for this creature.